OCT 0 1 1987

HW-113

John Durrell
Ventron, Inc.
P.O. Box 1224
Elma, Washington 98541

Dear Mr. Durrell:

The Environmental Protection Agency (EPA), through our contractor, Ecology and Environment (E&E), has completed the preliminary assessment of Ventron, Inc. A copy of the subject report is enclosed.

Based on this assessment, EPA does not anticipate further investigation under Superfund. E&E's recommendations, with which EPA concurs, are outlined on page 4 of this report. If you have further questions, I may be reached at (206) 442-7215.

Sincerely,

William J. Glasser, R.S., M.P.H.
Environmental Protection Specialist
Superfund Branch

Enclosure

cc: Emily Ray, Ecology, Olympia
Bob Kievit, EPA-WOO
Ecology, SWRD
Kevin Varness, Grays Harbor Division of Environmental Health

W.GLASSER:cb:9/30/87 0833P

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

REPLY TO
ATTN OF: HW-113

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Ventron, Inc.
P.O. Box 1224
Elma, Washington 98541

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cc: Emily Ray, Ecology, Olympia
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PRELIMINARY ASSESSMENT REPORT
VENTRON INC., DIVISION OF THIOKOL
ELMA, WASHINGTON

TDD F10-8709-11

Report Prepared by: Ecology and Environment, Inc.
Date: September 1987

Submitted to: J.E. Osborn, Regional Project Officer
Field Operations and Technical Support Branch
U.S. Environmental Protection Agency
Region X
Seattle, Washington

ecology and environment, inc.
101 YESLER WAY, SEATTLE, WASHINGTON, 98104, TEL. 206/624-9537
International Specialists in the Environment

ecology and environment, inc.
101 YESLER WAY, SEATTLE, WASHINGTON, 98104, TEL. 206/624-9537
International Specialists in the Environment

MEMORANDUM

DATE: September 23, 1987

TO: John Osborn, FIT-RPO, USEPA, Region X

THRU: for David Buecker, FIT-OM, E&E, Seattle MAT

FROM: Stephen Livingston, FIT-SM, E&E, Seattle SGL

SUBJ: Preliminary Assessment Report for
Ventron Inc., Division of Thiokol
Elma, Washington

REF: TDD F10-8709-11

CC: Deborah Flood, HWD-SM, USEPA, Region X
Jeffrey Villnow, FIT-PM, E&E, Seattle
Thomas Tobin, E&E, Seattle

1. Introduction and Purpose of the Preliminary Assessment:

Pursuant to U.S. Environmental Protection Agency (EPA) Contract No. 68-01-7347 and Technical Directive Document (TDD) F10-8709-11 Ecology and Environment, Inc. (E&E) conducted a Preliminary Assessment (PA) of Ventron Inc., Division of Thiokol in Elma, Washington. The PA represents the second of a three-step assessment process which begins with Site Discovery and concludes, if necessary, with a Site Inspection. The assessment process, in general, is intended to identify, compare, and rank the potential hazards associated with a particular site relative to other sites across the nation for the purpose of identifying priority sites requiring remedial responses. It does not include extensive or complete site characterization, contaminant fate determination, or quantitative risk assessment.

The Ventron Inc. Site PA was conducted to identify potential public health and/or environmental hazards related to the site and, if present, evaluate the need for additional investigative action. The PA is based on data derived from available files and literature pertaining to the site. Information developed during the PA is summarized in Appendix A on EPA Form 2070-12.

2. Person(s) Conducting the Preliminary Assessment:

Stephen Livingston, FIT-SM, E&E, Seattle

3. Person(s) Contacted for Site Specific Information:

John Durrell, Plant Manager - Ventron Inc., (206) 482-4350.

4. Information Obtained During the File Review:

o Site Location and Description - Ventron Inc., a division of Morton Thiokol, is located in Grays Harbor County, Washington, Section 1; Township 17 North; Range 6 West. The town of Elma, Washington, at the junction of U.S. Route 12 and State Route 8, is approximately 1 mile to the northwest of the site. Mile 25 of the Chehalis River winds past Ventron Inc. approximately 0.75 miles to the southwest.

Ventron Inc. is a fenced facility that consists of a warehouse, administrative building, effluent treatment area, several process buildings, a hazardous waste storage area no longer in use, 3 product storage tanks (200,000 gal., 100,000 gal., and 100,000 gal. capacities, respectively) used to hold the finished product prior to shipment, and a shipping and receiving area (the receiving area is contained inside a building) (Figure 1) (1). A spur of the Burlington Northern Railroad enters and exits the facility through a gate, bringing raw materials into the plant and removing the finished product. The loading and unloading areas are diked for the purpose of containing spills and storm water (2). According to John Durrell, Plant Manager of Ventron Inc., no process waters, spills, or storm water run-off leave the site without treatment (2).

Ventron Inc. is a RCRA regulated facility which formulates sodium borohydride for use in the pulp and paper industry as a bleaching agent. Raw materials including metallic sodium, boric acid, and hydrogen are combined with a methanol/lithium chloride mixture in a reactor where heat and steam are used to complete the formulation of sodium borohydride (2). Figure 2 depicts a process flow chart for the facility. Some process details are considered a trade secret by Morton Thiokol and consequently are not discussed here.

o Site History / Potential Problem(s) at Site - Ventron Inc. began operations in April of 1976. Before this time no other facility existed at this location (2). In 1977, the State of Washington issued Ventron Inc. an environmental award for innovative pollution control measures (3).

Before process improvements were adapted in 1985, the methanol/lithium chloride, a medium for the distillation of sodium borohydride, would eventually become contaminated in the system by reacting with process related iron piping and need to be replaced with a fresh mixture (2). This spent toxic and soluble mixture was treated as a hazardous waste and stored in 250 gallon stainless steel tote containers on a concrete pad until final disposal at

Arlington, Oregon (1,4). However, by 1985, Ventron had removed the source of methanol/lithium chloride contamination by coating the process related iron piping with teflon (2). Consequently, the previously contaminated waste no longer required disposal and was recycled in the system (2). As a result, Ventron began formal closure for their hazardous waste storage facility with the intent of mitigating their hazardous waste status.

The reactors in which the sodium borohydride is formulated periodically require cleaning, prior to 1981, which generated sodium hydride (1). The sodium hydride was treated in the following manner. When the weather was dry, the sodium hydride solid was spread on a concrete pad and hydrolized to form a strong caustic which was then neutralized in the wastewater treatment system and handled as a non-hazardous waste (1). However, after 1981, no sodium hydride was generated due to process improvements which allowed for the internal recycling of the sodium hydride (5).

According to Paul Stasch with the Southwest Regional Office of the Washington Department of Ecology (Ecology); Ventron Inc. no longer requires regulation, is a clean facility, and has no need of further investigation (3).

- Physical Environment - Ventron Inc. is situated in the floodplain of the Chehalis River. Small lakes, creeks, marshes, and swamps abound in this area (5). The Chehalis River Basin is bordered by low hills of Tertiary bedrock (6). The basin itself is composed mainly of alluvial deposits of unconsolidated and interbedded river-laid silts, sands, and gravels (6). Between the basin and the low hills is an area of terrace deposits of Vashon Drift consisting mainly of coarse sands and gravels with some interbeds of clay (6). Within three miles of Ventron Inc., a population of less than 4,000 people acquire their drinking water from shallow wells between 20 and 100 feet below the surface in an aquifer mostly composed of sands and gravels (7). The upper aquifer, from which all wells in the vicinity of this site draw their water, ranges from approximately 5 feet to 100 feet below the surface (6). A lower aquifer is present and extends below the 100 foot depth (6). The net annual precipitation in this area amounts to approximately 64 inches (8).

- Waste Types, Quantities, and Characteristics - Currently, no hazardous wastes are reportedly being generated by Ventron, Inc. (5). All facility wastewater (process and storm) converge in two treatment tanks for the removal of oil and for neutralization before entering the Elma Sewage Treatment Plant (1).

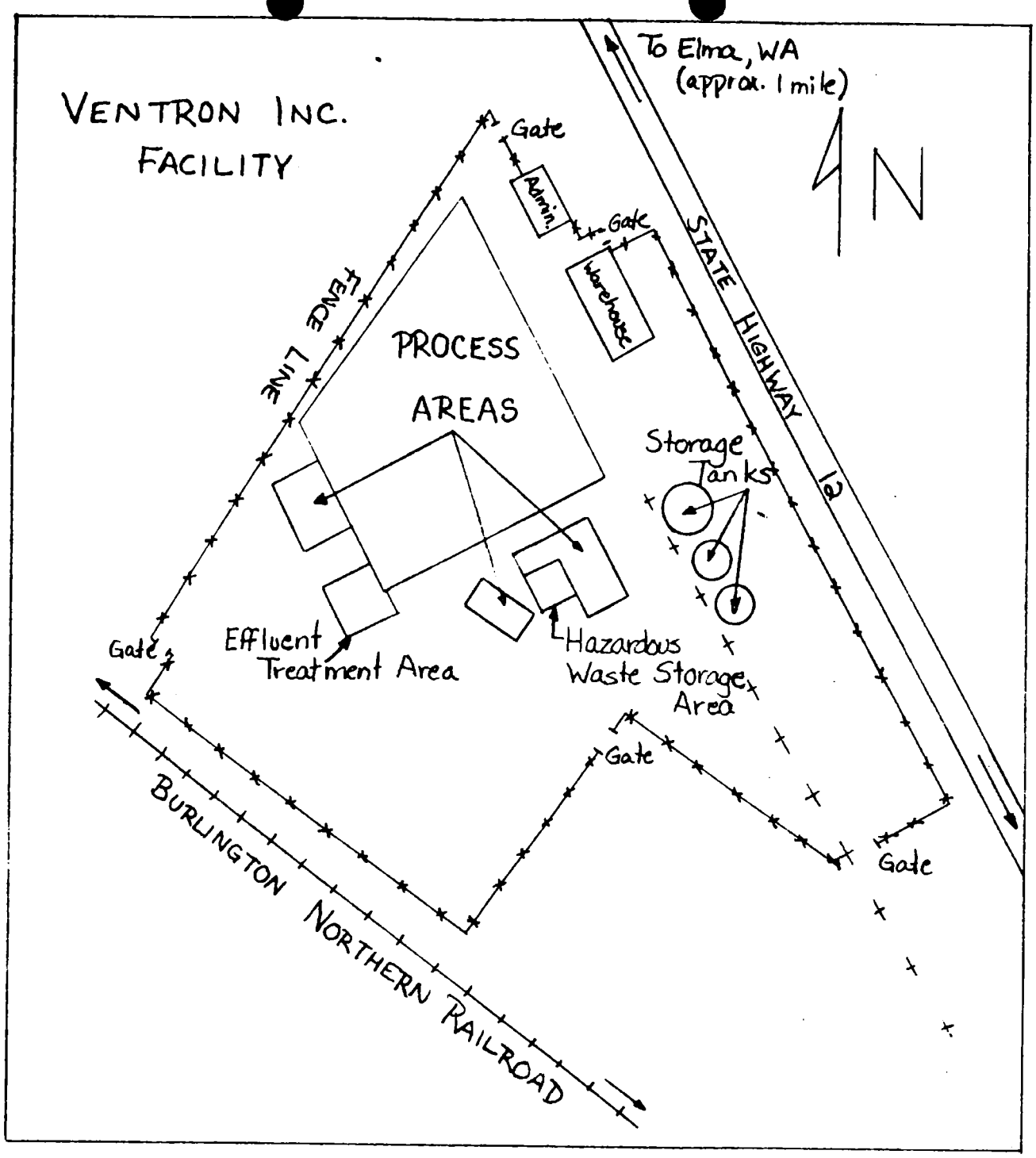
Prior to 1985, iron contaminated methanol/lithium chloride mixtures were also generated. From 1983 - 1985, approximately 10,396 pounds were generated and disposed of at Arlington, Oregon (2). By 1985, Ventron ceased generating methanol/lithium chloride as a hazardous waste.

- o Pollutants, Mobilization, Pathways, and Risks - Since 1985, no hazardous wastes have been generated by Ventron Inc. Their previous disposal practices have reportedly been efficient and environmentally conscious (3). During closure of the hazardous waste storage facility, the concrete pad used to store the contaminated methanol/lithium chloride was sand blasted and the rinse water was analyzed for methanol/lithium chloride (3). The analytical data showed no detectable amounts of methanol/lithium chloride (3). Available information, therefore, indicates that Ventron Inc. poses little risk to human health or the environment.

5. Priority Assessment: None

6. Follow-up Recommendations:

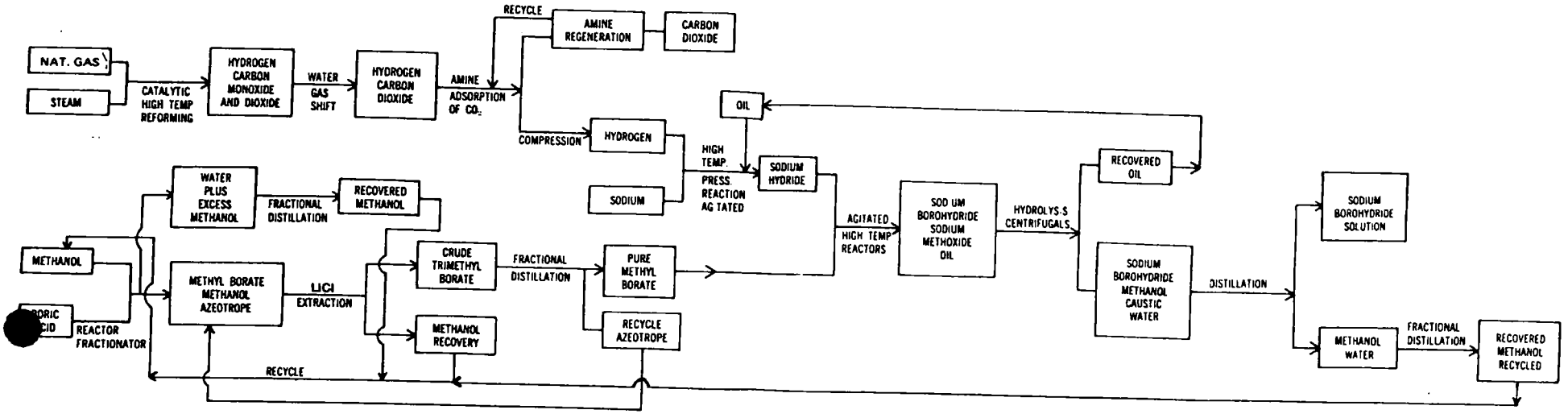
No further action is recommended at the Ventron Inc. Site under CERCLA/SARA. However, since this is an active RCRA facility, it is recommended that the Southwest Regional Office of Ecology provide EPA Region X with documentation of closure compliance and proceedings for the hazardous waste storage facility, including analytical data on methanol/lithium chloride sampling conducted during closure.



Ecology & Environment, Inc.
F10-8709-11
SJL - 9/17/87

FIGURE 1
Site Sketch
Ventron Inc.
Elma, WA

VENTRON INCORPORATED CHEMICALS DIVISION



Source: Ventron Incorporated

ecology & environment, inc.	
Job: F10-8709-11	Waste Site: WA 0398
Drawn by: B.T.	Date: 9/22/1987

FIGURE 2
PROCESS FLOW CHART
SODIUM BOROHYDRIDE FROM STEAM
NATURAL GAS, SODIUM METAL
BORIC ACID
Elma, WA

REFERENCES

1. USEPA Region X Consolidated RCRA Site File.

2. Personal Communication, John Durrell (206) 482-4350, Plant Manager, Ventron Inc., September 15, 1987.

3. Personal Communication, Paul Stasch (206) 586-2713, Southwest Regional Office, WDOE, September 14, 1987.

4. Dangerous Properties of Industrial Materials, Sixth Edition, N. Irving Sax, 1984.

5. Personal Communication, Bob Holman (206) 482-4350, Technical Manager, Ventron Inc., October 6, 1987.

6. U.S.G.S. Topographic Quadrangle Maps, Elma (1986), South Elma (1981).

7. State of Washington - Water Supply Bulletin No. 30, Geology and Ground Water Resources of the Lower Chehalis Valley and Adjacent Areas, Paul A. Eddy, 1966.

8. Personal Communication, Mr. Hamilton (206) 482-2212, Elma City Water, September 14, 1987.

9. Climatic Atlas of the United States, 1968.

ecology and environment, inc.
101 YESLER WAY, SEATTLE, WASHINGTON, 98104, TEL. 206/624-9537
International Specialists in the Environment

EPA PRELIMINARY ASSESSMENT FORM 2070-12
FOR
VENTRON INC., DIVISION OF THIOKOL
ELMA, WASHINGTON

TDD Number: F10-8709-11

FIT Investigator: Stephen Livingston

Report Prepared By: Stephen Livingston

Report Date: 09/14/87

Submitted to: John Osborn, RPO
Field Operations and Technical Support Branch
U.S. Environmental Protection Agency
Region X
Seattle, WA

APPENDIX A

EPA FORM 2070-12

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 State	02 Site Number
WA	0020231536

II. SITE NAME AND LOCATION

01 Site Name (Legal, common, or descriptive name of site)	02 Street, Route No., or Specific Location Identifier				
Ventron Inc. - Division of Thiokol	P. O. Box 1224				
03 City	**04 State**	**05 Zip Code**	**06 County**	**07 County Code**	**08 Cong Dist**
Elma	WA	98541	Grays Harbor	027	03

09 Coordinates Latitude	Longitude
46° 59' 44."	123° 22' 49."

10 Directions to Site (Starting from nearest public road)
Take U.S. Route 12 south from its intersection with State Highway 8 at Elma, Washington. Approximately 1 mile south from this intersection is Ventron Inc., located to the west.

III. RESPONSIBLE PARTIES

01 Owner (if known)	02 Street (Business, mailing, residential)			
Morton Thiokol Corporation	Unknown			
03 City	**04 State**	**05 Zip Code**	**06 Telephone Number**	
Newtown	PA	Unknown	( ) Unknown	
07 Operator (if known and different from owner)	**08 Street (Business, mailing, residential)**			
Ventron Inc. - Division of Thiokol	P. O. Box 1224			
09 City	**10 State**	**11 Zip Code**	**12 Telephone Number**	
Elma	WA	98541	(206) 482-4350	

13 Type of Ownership (Check one)
[X] A. Private [ ] B. Federal _____ (agency name) [ ] C. State [ ] C. County [ ] E. Municipal
[ ] F. Other _____ (specify) [ ] G. Unknown

14 Owner/Operator Notification on File (Check all that apply)
[X] A. RCRA 3001 Date Received: 05 /06 /85 (Month Day Year) [ ] B. Uncontrolled Waste Site (CERCLA 103c) Date Received: / / (Month Day Year) [ ] C. None

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 On-Site Inspection
[ ] Yes Date / / (Month Day Year)
[X] No
[ ] A. EPA [ ] B. EPA Contractor [ ] C. State [ ] D. Other Contractor
[ ] E. Local Health Official [ ] F. Other _____ (specify)
Contractor Names(s): _____

02 Site Status (Check one)
[X] A. Active [ ] B. Inactive [ ] C. Unknown

03 Years of Operation
1976 (Beginning Year) | Present (Ending Year) [ ] Unknown

04 Description of Substances Possibly Present, Known, or Alleged

Lithium Chloride, a waste product of the sodium borohydride formulation process, was being stored on site in 250 gallon stainless steel containers.

05 Description of Potential Hazard to Environment and/or Population
Potential hazard exists from the storage of lithium chloride. However, lithium chloride has not been stored at the facility for three years. It is not expected that storage of this substance will ever be conducted in the future, and past storage practices have been reportedly sound.

V. PRIORITY ASSESSMENT

01 Priority for Inspection (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
[ ] A. High (Inspection required promptly) [ ] B. Medium (Inspection required) [ ] C. Low (Inspect on time available basis) [X] D. None (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 Contact	02 Of (Agency/Organization)			03 Telephone No.
William Glasser	USEPA, Region X, Superfund			(206) 442-7215
04 Person Responsible for Assessment	**05 Agency**	**06 Organization**	**07 Telephone No.**	**08 Date**
Stephen Livingston	EPA/FIT	E&E	(206)624-9537	09 /14 /87 (Month Day Year)

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 State	02 Site Number
WA	D020231536

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 Physical States (Check all that apply)

- ☐ A. Solid
- ☐ B. Powder, Fines
- ☐ C. Sludge
- ☐ D. Other N/A (Specify)
- ☐ E. Slurry
- ☐ F. Liquid
- ☐ G. Gas

02 Waste Quantity at Site (Measure of waste quantities must be independent)

- Tons _____
- Cubic Yards N/A
- No. of Drums _____

03 Waste Characteristics (Check all that apply)

- ☐ A. Toxic
- ☐ B. Corrosive
- ☐ C. Radioactive
- ☐ D. Persistent
- ☐ E. Soluble
- ☐ F. Infectious
- ☐ G. Flammable
- ☐ H. Ignitable
- ☐ I. Highly Volatile
- ☐ J. Explosive
- ☐ K. Reactive
- ☐ L. Incompatible
- ☐ M. Not Applicable

N/A

III. WASTE TYPE

Category	Substance Name	01 Gross Amount	02 Unit of Measure	03 Comments
SLU	Sludge			No hazardous wastes have reportedly been generated at this facility for three years.
OLW	Oily Waste	N/A		
SOL	Solvents			
PSD	Pesticides			
OCC	Other Organic Chemicals			
IOC	Inorganic Chemicals			
ACD	Acids			
BAS	Bases			
MES	Heavy Metals			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 Category	02 Substance Name	03 CAS Number	04 Storage/Disposal Method	05 Concentration	06 Measure of Concentration
	N/A				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

Category	01 Feedstock Name	02 CAS Number	Category	01 Feedstock Name	02 CAS Number
FDS	N/A		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

USEPA Region X Consolidated Site File.
Personal Communication, Paul Staach (206) 586-2713, 09/14/87.
Personal Communication, Bob Holman (206) 482-4350, 09/14/87.

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 State	02 Site Number
WA	D020231536

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. Ground Water Contamination
03 Population Potentially Affected: _____
02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ B. Surface Water Contamination
03 Population Potentially Affected: _____
02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ C. Contamination of Air
03 Population Potentially Affected: _____
02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ D. Fire/Explosive Conditions
03 Population Potentially Affected: _____
02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ E. Direct Contact
03 Population Potentially Affected: _____
02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ F. Contamination of Soil
03 Area Potentially Affected (Acres) _____
02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ G. Drinking Water Contamination
03 Population Potentially Affected: _____
02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ H. Worker Exposure/Injury
03 Workers Potentially Affected: _____
02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ I. Population Exposure/Injury
03 Population Potentially Affected: _____
02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 State	02 Site Number
WA	D020231536

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. Damage to Flora — 02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ K. Damage to Fauna — 02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description (include name(s) of species)

None reported, observed, or suspected.

01 ☐ L. Contamination of Food Chain — 02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ M. Unstable Containment of Wastes (Spills/runoff/standing liquids, leaking drums) — 02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
03 Population Potentially Affected: _____ 04 Narrative Description

None reported, observed, or suspected.

01 ☐ N. Damage to Off-site Property — 02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ O. Contamination of Sewers, Storm Drains, WWTPs — 02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

01 ☐ P. Illegal/Unauthorized Dumping — 02 ☐ Observed (Date: _____) ☐ Potential ☐ Alleged
04 Narrative Description

None reported, observed, or suspected.

05 Description of Any Other Known, Potential, or Alleged Hazards

None reported, observed, or suspected.

III. TOTAL POPULATION POTENTIALLY AFFECTED: N/A

IV. COMMENTS

It is the impression of the SW Regional Office of the WDOE that this site poses no threat to human health or the environment. Ventron Inc. has undergone a formal closure for their storage facility. Hazardous wastes have not been generated or stored at this site for approximately three years.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

USEPA Region X Consolidated Site File.
Personal Communication, Paul Stasch (206) 586-2713, 09/14/87